REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

The undersigned wishes to express appreciation to the Examiner and the Examiner's supervisor for the very helpful telephonic interview of May 17, 2010.

Claims 1-7, 10 and 19-22 stand rejected under 35 USC 103 as allegedly being obvious over Tanekawa et al. Withdrawal of the rejection is submitted to be in order for the reasons that follow.

The present invention relates to a process to produce a composition containing 5'-ribonucleotides. The process comprises, in step a), subjecting a microorganism to autolysis. The conditions of autolysis are such that a substantial part of the RNA remains in a form degradable to 5' ribonucleotides and a substantial part of the RNA remains associated with the cell wall fraction (see p. 7 of the disclosure, l. 11-14). In step (b) of the process, the autolysate is subjected to a solid-liquid separation and the RNA-containing cell wall fraction is recovered. In step c), the RNA in the recovered RNA-containing cell wall fraction is converted to 5-ribonucleotides.

Tanekawa et al relates to a process to make a yeast extract containing 5-ribonucleotides. The process of Tanekawa et al starts by autolyzing the cells. In accordance with the Tanekawa et al process, the protein of the yeast cells "is hydrolysed effectively to its constituting amino acids and oligopeptides, while the decomposition or hydrolysis of intracellular RNA is suppressed" (col. 3,1. 24-27). In step (2) of the process of Tanekawa et al, RNA is extracted from the autolyzed yeast

cells (col. 3, l. 40-43). After this extraction, a suspension results comprising, in addition to soluble components, an insoluble residue that is mainly yeast cell walls (see col. 4, lines 13-16).

Applicants submit that Tanekawa et al does not teach, or would it have suggested, that, at any stage in the process (either prior to or after extraction), RNA is bound to the cell wall fraction or that it needs to be released from the cell wall fraction.

On page 2 of the Office Action, the Examiner states that Tanekawa discloses that *"the cell wall portion contains 50-80% intracellular RNA which is only partially decomposed"*. Applicants respectfully point out that Tankawa et al, in fact, states that 50~80% of the RNA remains not decomposed in the autolysed yeast cells" (col. 3, lines 33 and 34).

Following extraction step (2), the process of Tanekawa et al can proceed in two different ways (col. 4, lines 17-20), referred to in the attached Figure as Tanekawa-A and Tanekawa-B.

In Tanekawa-A, RNA is first converted to 5-ribonucleotides in the suspension comprising, in addition to soluble cell components, the insoluble residue that is mainly yeast cell walls, followed by a solid-liquid separation in order to recover the soluble components (i.e., to obtain a yeast extract).

In Tanekawa-B, a solid-liquid-separation is first carried out, whereby the soluble cell components are recovered, followed by conversion of RNA to 5'-ribonucleotides.

That is, in Tanekawa-B, the cell wall fraction is removed before conversion of RNA to 5'-ribonucleotides.

It will be clear from the attached Figure that, in both Tanekawa-A and Tanekawa-B, the soluble cell components are present when RNA is converted to 5'-ribonucleotides. In contrast, in the process of the instant invention, the soluble cell components are absent when RNA is converted to 5'-ribonucleotides because the present process proceeds through a solid-liquid separation wherein the cell wall fraction is recovered prior to conversion of the RNA present in the recovered RNA-containing cell wall fraction into 5' ribonucleotides.

The distinctions between the claimed process and the process of the cited art are clear from the attached Figure 1. Attention is directed particularly to the fact that the fraction "fed to" step c) in the claimed process is the cell wall fraction resulting from the solid/liquid separation while, in Tanekawa et al, soluble cell components are present when RNA is converted to 5' ribonucleotides.

In summary, nowhere in Tanekawa et al is there any teaching or suggestion (i) to recover cell walls in order to convert RNA to 5'-ribonucleotides or (ii) that RNA is bound to cell walls. Therefore, it would not have been obvious to the skilled person, based on Tanekawa et al, to devise a process in which the yeast cell walls were recovered in order to convert RNA into 5-ribonucleotides, in order to obtain a yeast extract rich in 5-ribonucleotides.

Reconsideration is requested.

Claims 8 and 9 stand rejected under 35 USC 103(a) as allegedly being obvious over Tanekawa et al (USP 4,303,680) and further in view of Halasz. Withdrawal of the rejection is submitted to be in order for the reasons that follow.

Claims 8 and 9 depend from claim 1 and claim 1 would not have been obvious over Tanekawa et al for the reasons detailed above. Halasz provides nothing that would have cured the fundamental failings of the primary reference. Accordingly, reconsideration is requested.

Claims 1-7, 10 and 19-22 stand rejected under 35 USC 103 as allegedly being obvious over Tanekawa et al in view of Morishige. Withdrawal of the rejection is submitted to be in order for the reasons that follow.

The distinctions between the claimed process and that of Tanekawa et al are detailed above. Nothing in the method of Morishige would have brought one skilled in the art closer to the claimed invention. Accordingly, reconsideration is requested.

Claims 1, 4, 7 and 10 stand provisionally rejected as representing obviousness-type double patenting over claims 6, 8, 9, 11, 13, 20, 26, 27 and 30 of U.S. Appln. No. 10/541,194. The possibility of filing a Terminal Disclaimer is noted. Given the provisional nature of the rejection, it is requested that it be held in abeyance until the case is otherwise in condition for allowance.

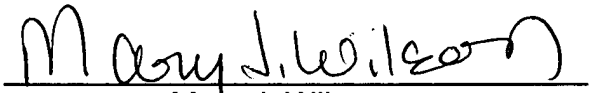
In addition to the above, Applicants submit herewith the Opinion of the International Search Authority and refer the Examiner's attention to paragraph 3.1 — 3.6 and to the conclusion expressed there that the claimed invention is both novel and inventive over art relied upon here.

Should any issues remain outstanding, the Examiner is urged to contact the undersigned by phone prior to the issuance of any further Actions.

This application is submitted to be in condition for allowance and a Notice to that effect is requested.

Respectfully submitted,

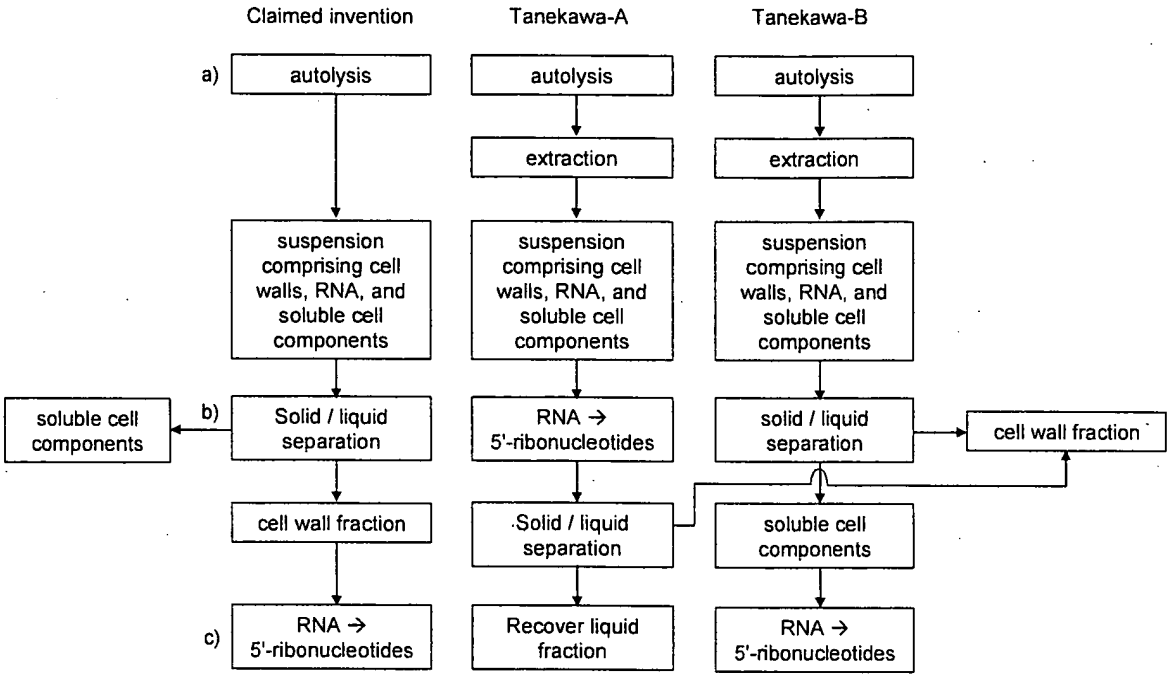
NIXON & VANDERHYE P.C.

By: 

Mary J. Wilson
Reg. No. 32,955

MJW:tat
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

Fig 1


Claimed invention
Tanekawa-A
Tanekawa-B
a)
autolysis
autolysis
autolysis
extraction
extraction
suspension comprising cell walls, RNA, and soluble cell components
suspension comprising cell walls, RNA, and soluble cell components
suspension comprising cell walls, RNA, and soluble cell components
soluble cell components
b)
Solid / liquid separation
RNA → 5'-ribonucleotides
solid / liquid separation
cell wall fraction
cell wall fraction
Solid / liquid separation
soluble cell components
c)
RNA → 5'-ribonucleotides
Recover liquid fraction
RNA → 5'-ribonucleotides